

WHAT IS CLAIMED IS:

1. A pixel compensating circuit for compensating defect pixels included in a video signal comprising:

5 a color information holding unit for holding plural kinds of color information of a defect pixel and pixels adjacent said defect pixel;

a difference calculating unit for calculating differences between zero defect color information among said color information of said defect pixel and said color information of said pixels adjacent said defect pixel corresponding to said zero defect color information;

10 a reference pixel determining unit for determining a reference pixel having color information that is the most similar to said zero defect color information; and

a compensating unit for calculating average values of said differences for said reference pixel and said defect pixel, and for compensating said zero defect color information of said defect pixel using said average value.

15 2. The pixel compensating circuit as cited in claim 1, wherein:

said reference pixel determining unit determines said reference pixel so that the sum of the absolute values of said differences becomes minimum.

3. The pixel compensating circuit as cited in claim 1, wherein:

20 when there exists defect in the adjacent pixel, said adjacent pixel having defect or defect color information of the adjacent pixel having defect is excluded.

4. The pixel compensating circuit as cited in claim 1, wherein:

said compensation is carried out per one pixel when said defect pixel are 2 or more in a row.

5. The pixel compensating circuit as cited in claim 1, further comprising:

25 a weighting unit for applying a coefficient to said difference depending on a distance between said defect pixel and the focused adjacent pixel.

6. The pixel compensating circuit as cited in claim 1, wherein:

said video signal is the one outputted from a solid state imaging device.

30 7. A pixel compensating method for compensating a defect pixel of a video signal, comprising the steps of:

holding plural kinds of color information of defect pixel and pixels adjacent

said defect pixel;

calculating differences between zero defect color information among said color information of said defect pixel and said color information of said pixels adjacent said defect pixel corresponding to said zero defect color information;

5 determining a reference pixel having color information that is the most similar to said zero defect color information;

calculating average values of said differences for said reference pixel and said defect pixel; and

10 compensating said zero defect color information of said defect pixel using said average value.

8. The pixel compensating method as cited in claim 7, wherein:

said reference pixel is determined so that the sum of absolute values of said differences becomes minimum.

9. The pixel compensating method as cited in claim 7, wherein:

15 when there exists defect in the adjacent pixel, said adjacent pixel having defect or defect color information of the adjacent pixel having defect is excluded.

10. The pixel compensating method as cited in claim 7, wherein:

said compensation is carried out per one pixel when said defect pixel are 2 or more in a row.

20 11. The pixel compensating method as cited in claim 7, wherein:

a coefficient is applied to said differences depending on a distance between said defect pixel and the focused adjacent pixel.

12. The pixel compensating method as cited in claim 7, wherein:

said video signal is the one outputted from a solid state imaging device.

25 13. An image taking apparatus including a pixel compensating circuit for compensating defect pixels included in a video signal, wherein said pixel compensating circuit comprising:

a color information holding unit for holding plural kinds of color information of a defect pixel and pixels adjacent to said defect pixel;

30 a difference calculating unit for calculating a difference between zero defect color information among said color information of said defect pixel and said color

information of said pixels adjacent to said defect pixel corresponding to said zero defect color information;

a reference pixel determining unit for determining a reference pixel having color information that is the most similar to said zero defect color information; and

5 a compensating unit for calculating an average value of said difference for said reference pixel and said defect pixel, and for compensating said zero defect color information of said defect pixel using said average value.

14. The image taking apparatus as cited in claim 13, wherein:

10 said reference pixel determining unit determines said reference pixel so that the sum of the absolute values of said difference becomes minimum.

15. The image taking apparatus as cited in claim 13, wherein:

when there exists defect in an adjacent pixel, said adjacent pixel having defect or defect color information of the adjacent pixel having defect is excluded.

16. The image taking apparatus as cited in claim 13, wherein:

15 said compensation is carried out per one pixel when said defect pixel are 2 or more in a row.

17. The image taking apparatus as cited in claim 13, further comprising:

a weighting unit for applying a coefficient to said difference depending on a distance between said defect pixel and the focused adjacent pixel.

20 18. The image taking apparatus as cited in claim 13, wherein:

said video signal is the one outputted from a solid state imaging device.